

The Dalles Dam Fishway Status Report

Date: 7/13/2014
 Inspection Period: 7/6/2014 to 7/12/2014

THE DALLES DAM



**US Army Corps
 of Engineers**
 Portland District

The Dalles Project-Fisheries
 P.O. Box 564
 The Dalles, OR 97058-9998
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Fishways are inspected twice daily plus one SCADA inspection

The Dalles Dam	Inspections Out of Criteria	Criteria Limit	Total Number of Inspections: Comments	21	Temperature: 66.8 F
NORTH FISHWAY					
Exit differential	0	≤ 0.5'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Entrance differential	0	1.0' - 2.0'	Average 1.3		
Entrance weir N1	0	depth (≥ 8')	Average 10.0		
Entrance weir N2	0	Closed			
PUD Intake differential	0	≤ 0.5'			
EAST FISHWAY					
Exit differential	0	≤ 0.5'			
Removable weirs 154-157	0	Per forebay	Auto adjusts 1' increments.		OOC at forebay 158.2
Weir 158-159 differential	0	1.0' ± 0.1'			
Count station differential	0	≤ 0.3'			
Weir crest depth	0	1.0' ± 0.1'			
Junction pool weir JP6	0	depth (≥ 7')	Average 10.6		Manually adjusted as needed.
East entrance differential	0	1.0' - 2.0'	Average 1.5		
Entrance weir E1	0	depth (≥ 8')	Average 6.3		Set in auto
Entrance weir E2	0	depth (≥ 8')	Average 13.9		Set in auto
Entrance weir E3	0	No criteria	Average 10.1		Manually adjusted as needed.
Collection channel velocity	0	1.5 - 4 fps	Average 2.1		
Transportation channel velocity	0	1.5 - 4 fps	Average 2.8		
North channel velocity	0	1.5 - 4 fps	Average 2.2		
South channel velocity	0	1.5 - 4 fps	Average 3.3		
West entrance differential	0	1.0' - 2.0'	Average 1.5		
Entrance weir W1	0	depth (≥ 8')	Average 9.0		
Entrance weir W2	0	depth (≥ 8')	Average 9.0		
Entrance weir W3	0	No criteria	Closed		
South entrance differential	0	1.0' - 2.0'	Average 1.5		
Entrance weir S1	0	depth (≥ 8')	Average 9.6		
Entrance weir S2	0	depth (≥ 8')	Average 9.6		
JUVENILE PASSAGE					
Sluiceway operation	0	1, 8, 18			
Turbine trashrack drawdown	0	<1.5', wkly	Range		
Spill volume	0	40%+-1%	Average 39.9		See average tab for daily averages
Spill Pattern	0	per FPP			
Turbine Unit Priority	0	per FPP			
Turbine 1% Efficiency	0	per FPP			

OTHER ISSUES:

Birds/Sea lions:

Bird observation data collected once daily. Refer to Avian Zone Map.

Gulls observed primarily downstream spillway. Approximately 65% of gulls return 10 minutes after hazing.

Cormorants are roosting on the Washington shore forebay electrical towers.

Operations:

Calibration for entrance weirs, channels and tailwater completed 7/11 and all were within criteria.

Entrance weir E3 set in manual due to sticking problems. Maintaining criteria depth. E1 and E2 set in auto.

Current Outages:

Transformer T8 (MU15 & MU16) de-rated to single unit full load.

MU20 out of service 5/19 to 7/17/2014 for overhaul.

MU1 out of service 7/7 to 7/10/2013 for annual.

MU16 out of service 7/7 to 7/17/2014 for ground fault diagnosis.

One unit out at a time except MU1-4, and MU7&8 7/7 to 1700 7/10/2014 for BPA Gen Drop Testing.

Maintenance:

New weir 159 leafs fabricated. Wheel install next. Completion by Oct1. Installation mid Dec.

North fishway pump motor replacement delivered. Install prior to Jan 2015.

Collection channel pump #1 removal 8/4 for repair of motor. Removal in conjunction with east fishway grating inspection when fish units off.

Purchasing oil boom for install at east exit. Vendor consultation site visit 7/31.

Parts on order for install of equalizing valve on PUD intake bulkhead for next winter dewatering.

East entrance weir E3 sticking problem to be addressed this winter. Does not affect criteria operation.

Bathymetry survey planned for east powerhouse forebay and tailwater Aug 4 and 5 to determine rock debris accumulation. FPOM approval in process.

Long term repair plans funding dependent; Upgrade east exit weirs 154-157, charter submitted to stabilize north ladder rock walls, remove collection channel diffusers, replace all entrance weir wheels with plastic composite wheels and repair/modify all east fishway dewatering pumps.

Fish related but non-fish funded items; spillway evaluation, spillway crane rehab, spillgate 10/11 wire rope replacement, HDC update fish unit reliability assessment, planning upgrade fish unit breakers and fish unit transformer replacement.

All spillway items on Critical Infrastructure list and Unfunded Requirement list.

Studies:

EFL Backup. Hole through dam, under roadway and into AWS conduit at junction pool. Starting Plans and Specs. Construction winter '15/'16.

Test pits excavation between fishladder and fishlock parking area in Nov. ADCP flow velocity survey in Aug. Both FPOM approved.

PUD - PUD 'freedom' second turbine proposal for north fishway in FERC review process. No new developments.

Flow Split - Record fall chinook runs expected in 2014. Concern for overcrowding in east fish ladder. ERDC model trip planned for end of Aug to determine potential spill operation to attract more fish to the north fish ladder.

Research/Contractors:

PSMFC PIT tag monitoring continues at count stations. No issues.

Columbia River Northern Pikeminnow Management Dam Angling: 32 hours fishing for 204 pikeminnow.

Umatilla, Yakama, and Nez Perce tribes started lamprey collection 6/12. As of 7/6, YN-319. Allocations are 374 per tribe.

ODFW Northern Pikeminnow Management Program evaluation electrofishing; No sampling at The Dalles this week.

Normandeau fish counters at north and east count stations 16 hours a day 1 April through 30 October. Investigating possible visibility improvements for north count station. Modification proposals to FPOM for approval.

PSMFC PUD weekly sampling: There were no salmonids in the sample for this week.

USDA hazer's launching pyrotechnics from downstream navlock peninsula. Also on call for sea lion hazing and pigeon removal as needed. Ends 7/31.

University of Idaho maintaining antennas and continuing downloads.

Removal last set of 3 derelict Vertical Barrier Screens from MU 12 gate well slot scheduled week of Aug11. Funding allocated.

Approved by;

Ron D. Twiner

Operation Project Manager The Dalles Dam

The Dalles Dam Fish Counts

The Dalles East

<i>Date</i>	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	Sockeye	Lamprey
7/6	2515	2148	367	674	292	382	29084	149
7/7	1779	1477	302	979	366	613	24876	95
7/8	1864	1334	530	1032	463	569	21991	110
7/9	1852	1508	344	1134	444	690	17287	212
7/10	1584	1193	391	1223	540	683	11970	101
7/11	1571	1273	298	1712	655	1057	8344	128
7/12	1238	967	271	1406	580	826	7957	85
totals	12403	9900	2503	8160	3340	4820	121509	880

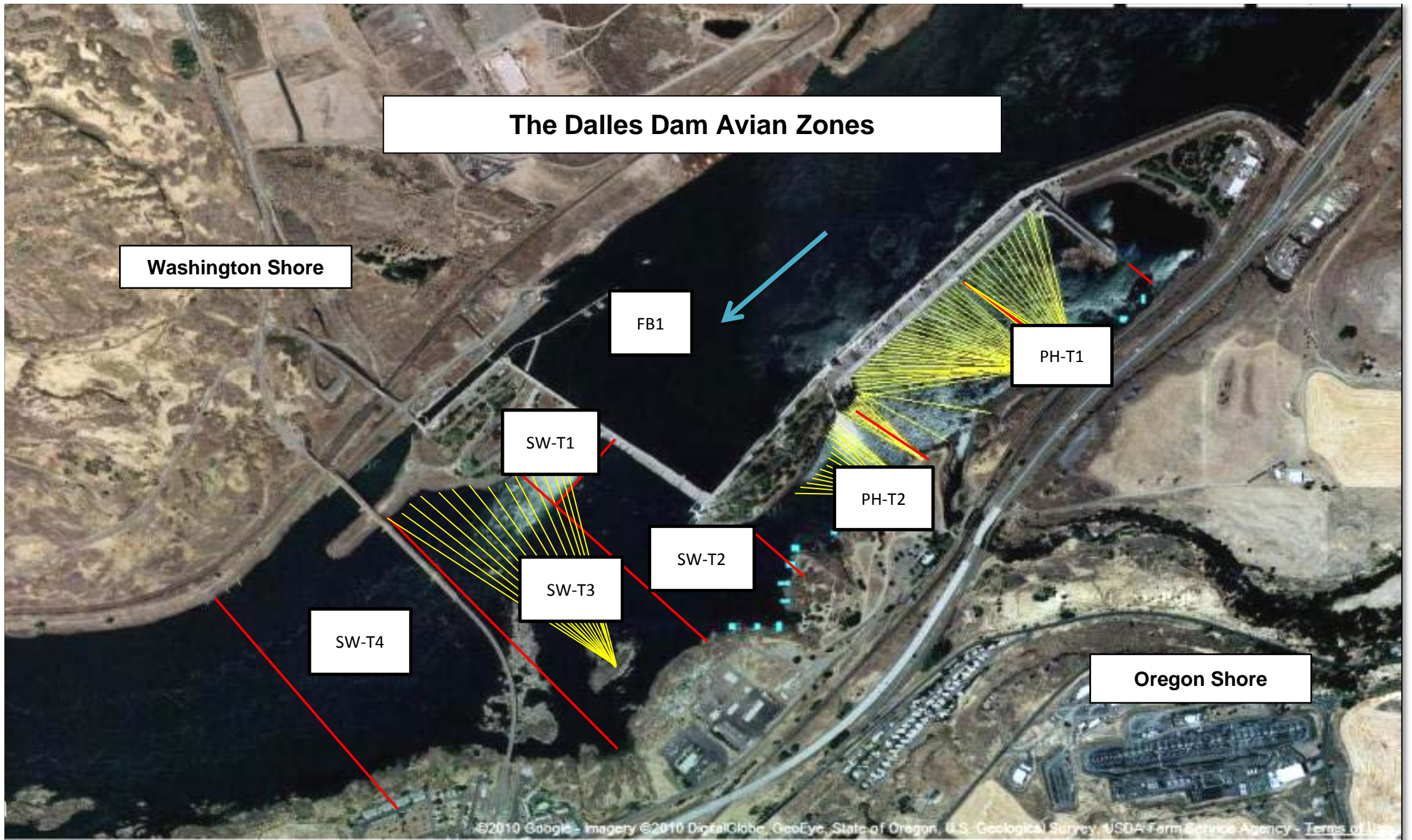
The Dalles North

<i>Date</i>	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	Sockeye	Lamprey
7/6	562	500	62	135	58	77	10326	64
7/7	224	202	22	126	40	86	2804	82
7/8	221	202	19	165	55	110	3690	133
7/9	516	478	38	297	131	166	5546	74
7/10	435	367	68	399	148	251	5444	94
7/11	420	365	55	452	160	292	4194	112
7/12	238	224	14	357	131	226	2138	53
totals	2616	2338	278	1931	723	1208	34142	612

Coho, Chum, and Pink Salmon not observed YTD

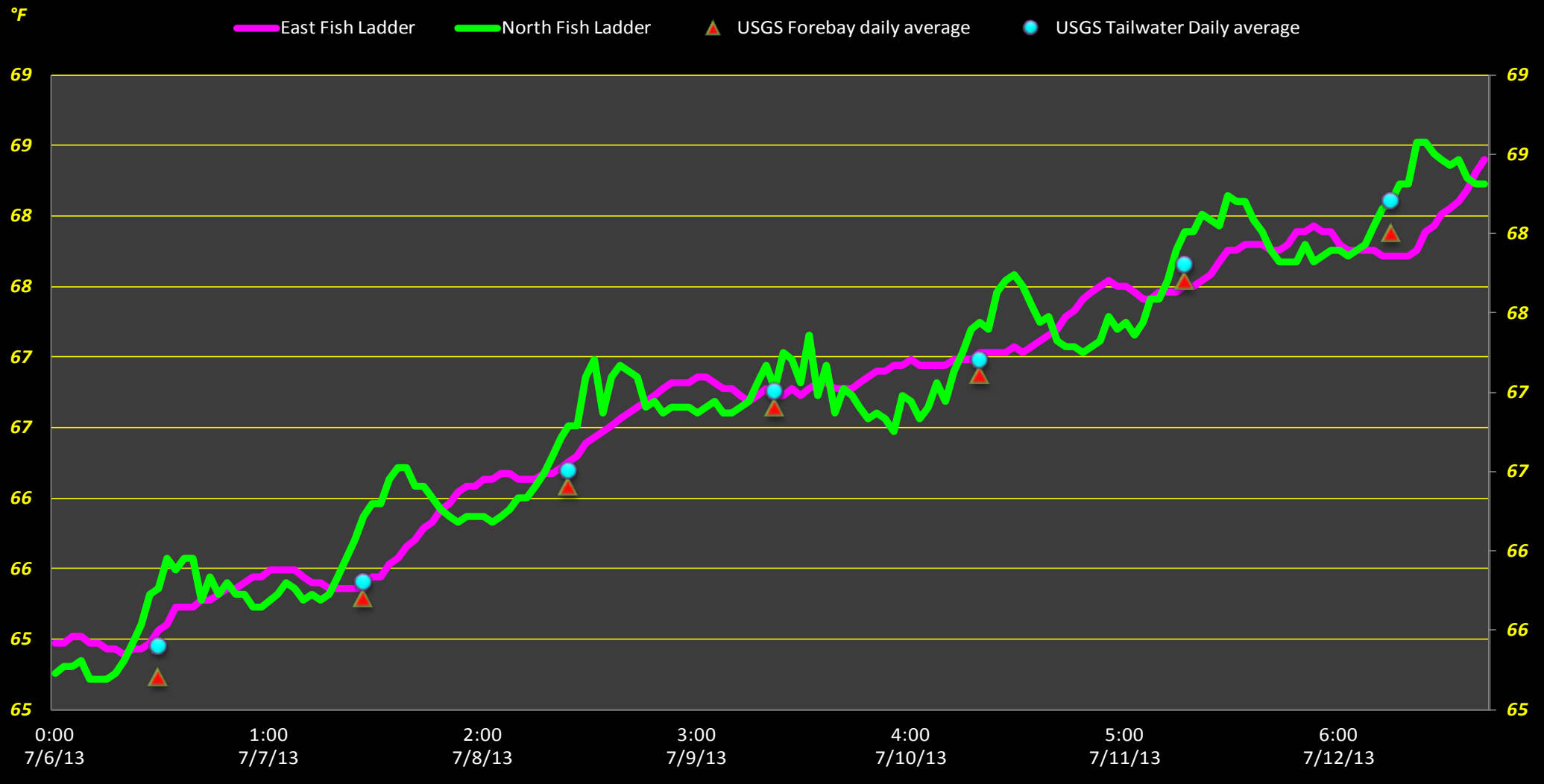
Data obtained via Hyperlink attached below

<http://www.nwp.usace.army.mil/Missions/Environment/Fish/Data.aspx>

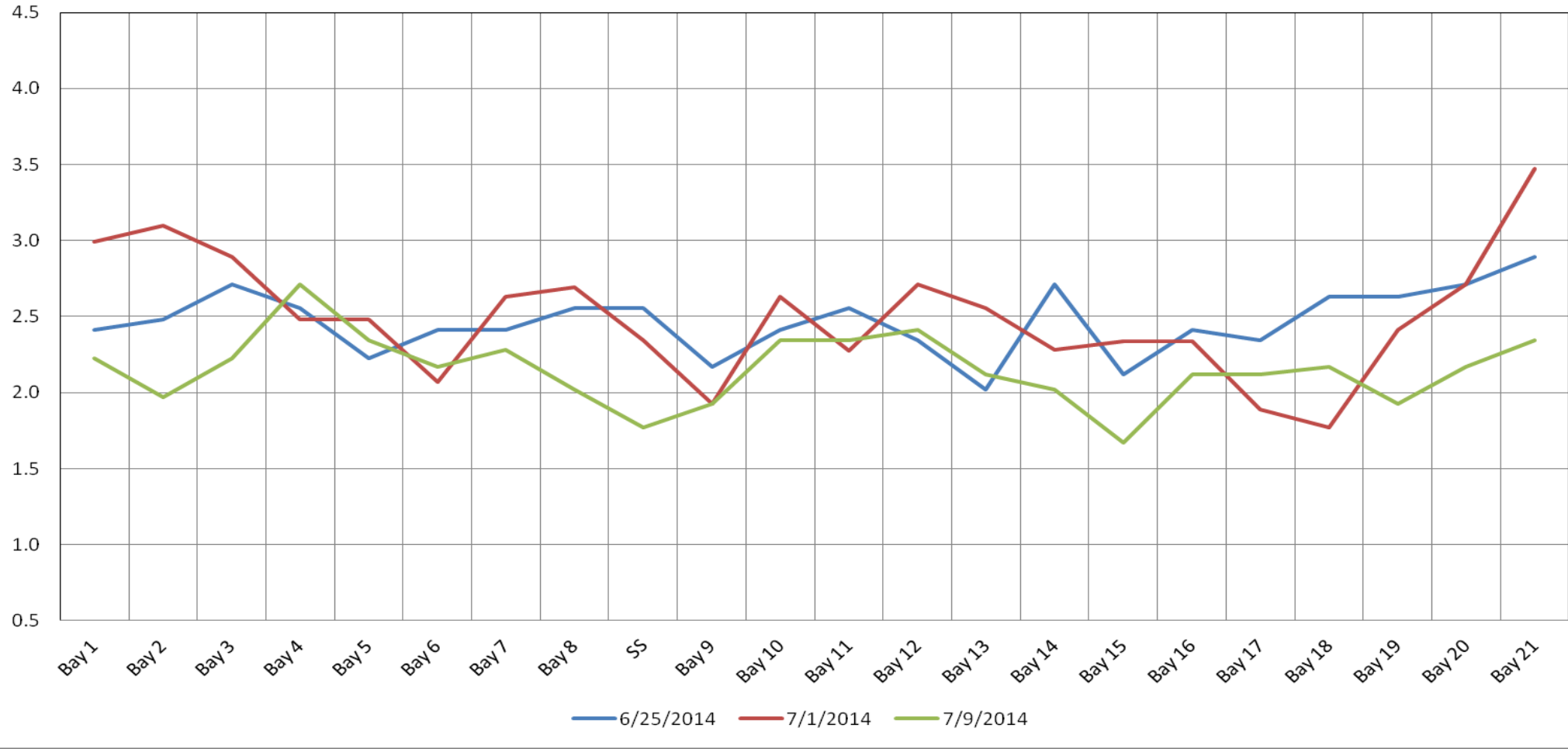


Hazing activity primarily in SW-T3 and SW-T4

The Dalles Dam Adult Fish Ladder(s) River/Water Temperatures



The Dalles Dam Collection Channel Velocities (In Criteria 1.5 - 4.0 fps)



	Forebay	Tailwater	Secchi:
USGS	65.2	65.4	3.0
	65.7	65.8	5.0
	66.4	66.5	5.0
	66.9	67.0	6.0
	67.1	67.2	5.0
DATA	67.7	67.8	5.0
	68.0	68.2	5.0
AVG:	66.8		AVG 4.9

The Dalles Dam Daily Readings and Averages for
Temperatures, Secchi, Entrances, and Spill

= out of criteria

Date:	North Ladder		East Ladder										Spill%		
	North Entrance		East Entrance					West Entrance			South Entrance				
	Differential	N1 Depth	Differential	E1 Depth	E2 Depth	E3 Depth	JP 6	Differential	W1 Depth	W2 Depth	W3 Depth	Differential	S1 Depth	S2 Depth	
7/6			1.5	6.5	13.5	8.9	9.4	1.3	9.3	9.3	Closed	1.4	9.7	9.7	
	1.3	9.9	1.5	6.4	13.5	9.0	9.6	1.3	9.3	9.3		1.5	9.6	9.6	
	1.3	10.0	1.7	6.5	13.6	9.7	10.3	1.3	9.5	9.4		1.4	9.8	9.8	
7/7			1.5	7.1	14.1	10.5	11.0	1.3	9.5	9.4		1.4	9.8	9.7	
	1.4	10.0	1.6	7.1	14.1	10.4	11.0	1.3	9.8	9.8		1.3	9.8	9.8	
	1.4	9.9	1.3	7.1	14.1	11.6	12.2	1.5	9.3	9.2		1.5	9.6	9.6	
7/8			1.5	6.9	14.0	10.3	10.8	1.4	9.4	9.4		1.5	9.6	9.6	
	1.2	10.2	1.6	5.9	14.1	10.5	11.1	1.6	8.5	8.5		1.5	9.6	9.6	
	1.4	9.9	1.6	6.0	14.1	11.4	12.0	1.6	9.0	9.1		1.5	9.7	9.7	
7/9			1.5	5.9	14.1	10.2	10.7	1.5	8.9	8.9		1.5	9.6	9.6	
	1.2	10.0	1.6	6.0	13.6	10.3	10.8	1.6	8.6	8.6		1.5	9.7	9.7	
	1.4	9.8	1.5	4.8	13.4	11.7	11.8	1.6	9.5	9.4		1.6	9.4	9.4	
7/10			1.7	4.9	13.4	9.2	9.7	1.5	9.5	9.5		1.5	9.5	9.4	
	1.2	9.9	1.8	5.0	14.0	9.5	10.1	1.6	8.3	8.3		1.4	9.7	9.6	
	1.3	10.1	1.5	7.5	14.1	10.4	11.0	1.5	9.0	9.0		1.5	9.5	9.5	
7/11			1.5	7.4	13.9	9.0	9.5	1.4	8.8	8.9	1.6	9.4	9.4		
	1.3	10.0	1.4	6.6	13.7	8.9	9.5	1.5	8.4	8.3	1.6	9.4	9.5		
	1.3	9.9	1.4	6.0	14.0	9.4	10.0	1.5	8.4	8.3	1.5	9.6	9.6		
7/12			1.6	5.9	14.0	10.4	10.9	1.7	8.2	8.3	1.6	9.5	9.5		
	1.2	10.1	1.5	6.4	14.0	10.6	11.2	1.5	9.0	8.9	1.5	9.5	9.6		
	1.3	10.1	1.5	5.5	14.1	10.3	10.9	1.5	9.0	9.0	1.4	9.6	9.6		
AVG:	1.3	10.0	1.5	6.3	13.9	10.1	10.6	1.5	9.0	9.0	Closed	1.5	9.6	9.6	39.9

Spill % values represent daily average from operations status report